



REQUEST FOR PROPOSALS

RIVER RESTORATION FEASIBILITY STUDY

Homestead Woolen Mills Dam, Ashuelot River, West Swanzey, N.H.

Introduction

The New Hampshire Department of Environmental Services (NHDES) and its partners wish to explore options to restore anadromous and resident fisheries movement to the Ashuelot River, a major tributary to the Connecticut River. The fisheries of particular interest are American shad, river herring, Atlantic salmon and American eel.

The Homestead Woolen Mills Dam (Homestead Dam) on the Ashuelot River in West Swanzey, New Hampshire must either be removed or repaired to meet state dam safety requirements. The private dam owner wishes to either remove the dam or transfer ownership to another entity who will then be responsible for either dam removal or dam repair. The installation of upstream and downstream fish passage will be required in the event that the dam is repaired and retained.

NHDES wishes to conduct a feasibility study on options to restore fish movement within the affected portion of the Ashuelot River, attain dam safety (through either dam removal or repair with fish passage) and ensure the stability of the Thompson Covered Bridge, which is located immediately upstream of the dam. The intent of the feasibility study is to review a significant amount of existing information, gather additional necessary information and synthesize these resources to conduct a permitable river restoration project. This study will focus not only on ecological issues, but also structural engineering, fluvial geomorphology, economics, historic and cultural resources, and other issues. The partners on this study include NHDES, Town of Swanzey, New Hampshire Fish and Game Department (NHFGD), NOAA Restoration Center, U.S. Fish and Wildlife Service (USFWS), Connecticut River Watershed Council (CRWC) and American Rivers.

The removal of the Homestead Dam has been a project of the New Hampshire River Restoration Task Force for several years. Due to the complexity of the project and the need to address the dam safety concerns in a timely fashion, the NHDES has decided to enlist the services of an engineering and environmental consultant to perform a feasibility study for the project. Some technical information has already been developed regarding the dam's potential removal. The availability of this information is noted in the Scope of Services, and consultants are strongly encouraged to consider this and other existing information in preparation of their technical proposal and cost proposal.

The NHDES has prepared this RFP in cooperation with our project partners in order to solicit proposals from qualified contractors to provide the deliverables requested in the following scope of services. These services may include final engineering and permitting if dam removal is deemed feasible.

Selection Procedure

1. Consultants are required to submit one (1) original and five (5) copies of their proposal package. Double-sided copies are appreciated. The package shall include:
 - a. Technical Proposal, not to exceed thirteen (13) typed, single-spaced pages.
 - b. Statement of Qualifications and directly relevant work experience, not to exceed seven (7) pages. The consultant shall clearly identify a primary contact for their proposal and clearly provide that person's phone number and email address.
 - c. List of references who may be contacted about the consultant's qualifications and work experience, not to exceed one (1) page.
 - d. (Optional) Curriculum vitae or resumes for project team members, not to exceed two (2) pages per team member.
2. The selection team will evaluate the proposals based on the following criteria:
 - a. experience with dam removals,
 - b. experience with bridge design and scour analysis,
 - c. knowledge of fish passage and geomorphic processes,
 - d. environmental engineering and design experience,
 - e. clarity and presentation of proposal,
 - f. demonstration of successful cooperation with local, state and federal agencies, and
 - g. demonstration of implementing creative solutions to complex river issues.The selection team will determine the top five (5) proposals. These firms will be asked for a personal interview. The consultants shall bring a sealed cost proposal to the interview.
3. Following the interviews, the selection team will rank the interviewed consultants according to preference for hiring to conduct the project. After the ranking is complete, the sealed cost proposal of the first ranked consultant will be opened and NHDES will proceed with contract negotiations with that firm. If negotiations are unsuccessful, NHDES will open the sealed cost proposal of the second ranked consultant and proceed with contract negotiations with that firm, and so on.

Pre-Bid Site Visit

A pre-bid site visit with a brief presentation on the project will occur at the dam site on Wednesday, October 15, 2003 at 1:00 p.m. The dam is in West Swanzey, N.H., which is south of Keene. From Keene: Proceed south on Route 10 / Winchester Street. After approximately 4 miles, left onto California Street. California Street becomes Main Street. Cross the Thompson Covered Bridge. The dam site is just downstream of the covered bridge. Parking is available in a clearing on the right immediately after the bridge.

Questions and Due Date:

NHDES staff will not respond to telephone questions about the RFP. Questions concerning this RFP must be received in writing to NHDES (see mailing address below) by 4:00 p.m. on Friday, October 17, 2003. Questions may also be submitted via e-mail to Stephanie Lindloff at slindloff@des.state.nh.us (Subject Line: Swanzey RFP Question) or by facsimile machine to (603) 271-7894 (Attn: Stephanie Lindloff). NHDES will post responses to all submitted questions at www.des.state.nh.us/dam/damremoval/ on Wednesday, October 22, 2003.

All proposals must be received by 4:00 p.m. on Wednesday, October 29, 2003 at:
New Hampshire Department of Environmental Services
c/o Stephanie Lindloff, Water Division - Dam Bureau
P.O. Box 95
Concord, NH 03302-0095

Any proposals received after this specified time will be rejected.

*Request for Proposals: River Restoration Feasibility Study
Homestead Woolen Mills Dam, West Swanzey, N.H.*

Time Line:

October 1, 2003	Request for Proposals (RFP) release
October 15, 2003	Pre-bid site visit
October 17, 2003	Due date for questions about RFP
October 22, 2003	Answers to submitted questions posted to web site
October 29, 2003	Due date for proposals
November 24, 2003	Selection of five finalists for interviews
** December 2003	Conduct interviews
** December 2003	Final selection

** These dates will be determined by October 22, 2003, and posted with the answers to submitted questions at www.des.state.nh.us/dam/damremoval/.

Disclaimer:

This RFP does not commit the NHDES to award a contract or to pay any costs incurred during the preparation of the proposal. The NHDES reserves the right to reject any or all of the proposals for completing this work. The NHDES also reserves the right to eliminate the need for the selected consultant to complete one or more tasks, pending the outcome of preceding related tasks or issues, and/or the availability of project partners to complete that task.

Scope of Services

The consultant shall provide detail on their approach and deliverables for the following tasks and subtasks:

Task 1. Existing Data Collection and Review

- 1 Collect and review available data and resource information on file with the NHDES, other state agencies, Town of Swanzey, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, other federal agencies and other applicable sources. To include but not be limited to the following existing data:
 - 1.1.1 Final Engineering Report on the effects of dam removal-related changes in river levels and velocities on scour susceptibility and the stability of the Thompson Covered Bridge with conceptual alternatives for scour protection.
 - 1.1.2 Data from ground penetrating radar surveys of the river channel, the bridge footprint and upstream of the dam. Surveys were determined to be inconclusive.
 - 1.1.3 Existing HEC-RAS model prepared by NHDES with revisions by CLD, Inc..
 - 1.1.4 NHDES file correspondence including meeting minutes on this project.
- 1.2 Perform a formal dam inspection and site investigation including photographs. The inspection should be conducted by a Professional Engineer in the State of New Hampshire. Identify dam repair needs and appropriate dam removal methods.
- 1.3 Prepare a technical summary memorandum discussing the environmental and structural issues, as well as any additional critical issues discovered, of the dam, river and bridge based on the information collected above.

Task 2. Field Survey and Base Mapping

- 2.1 Dam Structure Topography Survey - The consultant shall complete a field survey of the dam structure, the Thompson Covered Bridge, and any impacted utilities and/or structures identified in Task 1. This should include property lines, existing easements and wetlands delineation.
- 2.2 Bathymetric Survey - The consultant shall complete a bathymetric survey of the impoundment including under the bridge and extending upstream and downstream of the dam as far as necessary to conduct the hydrologic analyses outlined below in Task 4.
- 2.3 Existing Conditions Plan - Depict the structures, topography and impoundment bathymetry in plan view and cross section.
- 2.4 Deed and Title Search on the dam site and impoundment-abutting properties.
- 2.5 Historic Resource Assessment -- Preparation of a NH Division of Historical Resources (NHDHR) Project Area Form. Generalized guidelines on conducting historic resource reviews for dam removal projects are [attached to this RFP](#) Level of information required is currently limited to the following sections: Archaeological Resources: Phase IA (Reconnaissance-level) and Historic/Architectural/Engineering Resources: Phase I.

Task 3. Sediment Management.

- 3.1 Review of existing information on sediment analysis, including:

*Request for Proposals: River Restoration Feasibility Study
Homestead Woolen Mills Dam, West Swanzey, N.H.*

- 3.1.1 Organic Analytical Results from sediment samples collected at project site by the U.S. Fish and Wildlife Service
- 3.1.2 “Sediment Management Plan for Homestead Woolen Mills Dam Removal” by R.T. Wood, 1999 Masters Project, Antioch New England Graduate School.
- 3.2 Review results of borings in existing resource (see Task 1.1.1). Assess needs for additional borings and/or field data collection.
- 3.3 Analyze sediment transport capabilities and mobility in conjunction with Task 4 for the dam removal alternatives proposed in Task 6.
- 3.4 Assess sediment analysis results and sediment transport results. Discuss appropriate sediment management options.

Task 4. Hydrology and Hydraulics Analysis

- 4.1 Conduct a hydrologic study on the Ashuelot River including the dam, bridge, extent of impoundment and surrounding wetlands. Incorporate generated data into alternatives analysis.
- 4.2 Conduct a hydraulic analysis to predict water surface and velocity profiles for both existing and post-removal conditions of the Homestead Dam. Incorporate generated data into alternatives analysis.
- 4.3 Perform a scour analysis on the Thompson Covered Bridge and any impacted utilities identified in Task 1 to evaluate the potential impact of dam removal.
- 4.4 There are residential wells in close proximity to the Ashuelot River in the impounded area. The consultant shall assess the potential impacts associated with dam removal to those wells under seasonal low flow and high groundwater withdrawal conditions.
- 4.5 Conduct a riverine ice survey upstream and downstream of the dam in order to collect ice data pre-dam removal. This data will assist the Army Corps Cold Regions Research and Engineering Laboratory in the determination of potential ice jam development in the event of dam removal.
- 4.6 Assess the impact of dam removal on the FEMA designated floodway. Prepare supporting documentation for the completion of a Letter of Map Amendment (LOMA) to be submitted to FEMA should dam removal become the preferred option.

Task 5. Other Issues of Importance

- 5.1 Fish passage. Assess whether the site – if the dam is removed -- would be passable by the fisheries of interest: American shad, river herring, Atlantic salmon and American eel. In the event that the dam is not removed, discuss appropriate project design options with the goal of effective upstream and downstream fish passage.
- 5.2 Structural bridge impacts. Assess impact of dam removal on bridge, pier and foundation stability. Discuss appropriate project design options with bridge stability as a stated goal.
- 5.3 Species of concern. Assess impact of dam removal on rare, threatened and endangered species located both up and downstream of the project area, including but not limited to dwarf wedgemussels and silver maple floodplain forest communities (see N.H. Natural Heritage Inventory information,

Ashuelot River Freshwater Mussel Surveys conducted by U.S. Fish and Wildlife Service).

- 5.4 Fire Water Supply. Analyze usage of impoundment by local fire departments for 1) a source of water for fire fighting in the area, and 2) flushing of pumper trucks. Analysis of dam removal's impacts on fire suppression capabilities should not be limited to the Village of West Swanzey system, but include upstream points that are utilized. Discuss and develop cost estimates for alternative fire water supply methods or sources, if determined to be necessary with dam removal option.
- 5.5 Stream Gage. Assess the impact of dam removal on the U.S. Geological Survey stream gage immediately upstream of the dam. Include possible relocation options.
- 5.6 Recreational Usage. Assess the impact of dam removal on boating, angling, swimming and other recreational uses of the river and impoundment.
- 5.7 Other socio-economic and political issues may arise during the consultant's research and investigation on the Homestead Dam. The consultant shall describe how such issues would be addressed and reported.
- 5.8 Assess the potential for invasive species to populate exposed lands in the impoundment area post-dam removal, and recommend methods of mitigating this occurrence, if appropriate.

Task 6. Feasibility Report Preparation

- 6.1 Alternatives analysis for the removal of the dam structure and structural stabilization of the Thompson Covered Bridge, if necessary.
- 6.2 Alternatives analysis to address other issues described in Task 5, which are not part of Task 6.1.
- 6.3 Preliminary costs for recommended alternatives analyzed in Tasks 6.1 and 6.2. Preliminary costs should be provided for at least one dam removal alternative and one dam retention alternative with upstream fish passage, including the cost of dam repair. In addition to construction cost estimates, these estimates should include the costs for engineering services to take the project to bid. This estimate should include the cost to prepare preliminary and final plans and specifications, permit application processing, and meeting attendance.

Task 7 Outreach and Coordination Meetings

- 7.1 Coordinate with project partners including NHDES, Town of Swanzey, NHFGD, USFWS, NOAA Restoration Center, CRWC and American Rivers.
- 7.2 Coordinate, allow input from, and present findings to the Town of Swanzey and other interested parties. Preparation of visual aids for the public. Provide for a qualified historian to attend two public informational meetings to present the findings of Task 2.5.

Task 8 Final Engineering and Permitting

- 8.1 If the removal of the dam is deemed feasible and permissible, and it is acceptable to the dam owner the consultant may be retained to provide final engineering plans and specifications suitable for bidding purposes and to obtain all necessary permits. The consultant shall describe projected time frames for completing final plans and specifications, and obtaining all necessary approvals.



NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources
19 Pillsbury Street, P. O. Box 2043, Concord NH 03302-2043
Voice/ TTY RELAY ACCESS 1-800-735-2964
<http://www.state.nh.us/nhdhr>

603-271-3483
603-271-3558
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preservation@nhdhr.state.nh.us

Generalized Guidelines for Research and Reporting:

Scope of Work for Proposed Dam Removals Pertaining to Historical and Archaeological Resources

Historic preservation laws and objectives:

Historic preservation “Review & Compliance” is a consultation process to identify significant historic properties so that any harm to them from government-assisted actions can be avoided or minimized. It is intended to be a conflict-resolution and problem-solving system, which balances the public interest in historic preservation with the public benefit from a variety of governmental initiatives. With respect to the proposed removal of a number of dams along New Hampshire’s waterways, we must first assume that most if not all dams are historic (50 years-age criteria).

Historic properties that are significant in history, architecture, archaeology, engineering, and culture are recognized by both the state and the federal governments as resources to be preserved and interpreted for the benefit of **all** citizens. They are **non-renewable resources** important to our individual and collective identity, and they are worthy of protection, investigation, interpretation, and conservation.

This policy does not mean that all properties of sufficient age to be considered “historic” are significant resources, nor does it mean that all significant historic properties can or should be saved. Rather, it is a directive to prevent needless destruction of our tangible cultural heritage, so that historical resources can exist in harmony with government-aided social and economic changes.

Purposes and Steps of Process:

The purpose of the historic preservation review process as defined under state law RSA 227-C: 9 and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470), implemented by the Federal Advisory Council on Historic Preservation’s (ACHP) procedures, is to balance the public interest in historic preservation with the public benefit from a variety of governmental initiatives.

- Define area of impact through the project scope. Division of Historical Resources (DHR) should be involved in preliminary discussions.
- Locate and identify potential historical, architectural, and archaeological resources within the project impact area.
- Evaluate identified resources that might be impacted by the project using National Register of Historic Places (NRHP) criteria for eligibility.
- Assess the probable effects a project would have on historic properties eligible for or listed the National Register.
- Develop means to resolve adverse effects.

The services of both Architectural Historians and Archaeological Consultants (meeting the minimum federal standards 36CFR 61.5) are required to address preservation concerns and to proceed smoothly through the review process. A scope of work should be submitted to the DHR for review and would include:

Identification of Historical Resources

Archaeological Resources: Phase I (Reconnaissance-level)

A Phase I Archaeological Reconnaissance-level survey is typically divided into two sub-phases (Phase IA and IB). Phase IA is defined in the following.

Minimally a Phase IA would need to be completed by a qualified archaeologist and submitted to the DHR for review and approval. Information includes:

- General location of project identified on USGS quadrangle map (provided by appropriate agency).
- Methodology statement including purpose of dam project (provided by appropriate agency).
 - Include possible impacts to areas upstream and downstream from dam removal (possible change in hydrology-information provided by appropriate agency).
 - Potential impacts to known sites would include:
 - Erosion to sites from changes in hydrology.
 - Exposure of sites due to lower pond and river levels.
 - Vandalism to exposed sites.
 - Construction impacts resulting from demolition activities.
- Detailed project map with area of impact defined including (provided by appropriate agency):
 - Areas proposed for access, staging, and fill removal/disposal.
- Background Research to include:
 - DHR site file search for known archaeological resources, both Native American and Historical sites.
 - NHDHR Project Area Form and related research as prepared by consulting Architectural Historian.

- Visual assessment of the proposed project area with regard to archaeological resources.
 - Site description that includes identification of existing archaeological resources.
 - Photo-documentation.
- Detailed map that defines study area including known historic and archaeological resources in close proximity.
 - Cellar holes, retaining walls, etc.
 - Previously identified Native American and Euro American archaeological resources within a 1-mile radius of existing dam.
- NHDHR Archaeological Inventory Forms completed or updated at the Minimum Documentation Level.
- Bibliography of all sources utilized, including informants, DHR's files and the Department of Environmental Services' dam files.

Historic/Architectural/Engineering Resources: Phase I

Minimally a Project Area Form would need to be completed by a qualified architectural historian and submitted to the DHR for review and approval. Information includes:

- Background Research to include:
 - History and evolution of the dam and study area within the town it is located in, supplemented with historic maps.
 - Information describing comparable resources within the watershed.
- Visual assessment of the proposed project area.
 - Map dam related potential historic resources and sites, with photo key.
 - Photo-documentation.
- Description of the dam and any other historical resources present within the study area.
 - Standing structures, sites, or foundations related to dam and/or abutting the impoundment.
 - Bridges, abutments, etc. (within hydrology area of impact-primarily downstream, although upstream should be considered)
 - Mill ponds.
 - Describe possible effects on historic viewshed.
- Submit text, mapping and photographs on Project Area Form to lead federal agency and DHR for review and approval.
 - Area form will include a summary of previous inventory projects in the study area and recommendations for additional individual and district inventory, if needed.
 - If any resources are part of a larger historic district, this evaluation should extend outside of the impact area to define that district.

- Bibliography of all sources utilized, including informants. DHR's files and the NH Environmental Services' dam files.

Evaluation of Historic Resources: Phase IB or II

- Archaeological Resources (Phase IB Archaeological Reconnaissance-level survey):
 - Level of effort recommended by the DHR, generally includes subsurface testing.
- Historic/Architectural/Engineering Resources (Phase II):
 - Complete NHDHR Individual Inventory Forms or District Forms as determined by DHR.
 - Apply the criteria for evaluation of significance of a resource for possible eligibility for the NRHP, if not already listed or nominated.

Consultation Phase for Historic Phase:

Continued consultation with DHR is needed in areas that are determined sensitive to archaeological resources and for historic properties determined eligible for the National Register of Historic Places.

- Determine effect of project on historical resources.
- Consult with the DHR and any identified consulting parties to avoid, minimize or mitigate adverse effects on historic properties.
- Conclude consultation with a Memorandum of Agreement (MOA), if needed.
- Include in MOA a clause for Post Dam Removal Monitoring.
 - Post Dam Removal Monitoring:
 - If there have been archaeological sites identified within the area of impact, the DHR recommends that a qualified archaeologist visually assess the sensitive areas associated with the dam for a year following removal (twice a year), depending on the change in hydrology. This will include potential effects to associated bridges.

Definitions:

Area of Potential Effects:

Determined as the geographic area or areas within which an undertaking may cause changes in the character or use of historic and archaeological properties, if any such properties exist.